

WHAT IS CLAIMED IS:

1. An information recording apparatus comprising:
 - a light source which emits a recording light for information recording based on an input signal;
 - a strategy signal generating unit which generates a strategy signal indicating a driving signal waveform obtained by modulating a recording signal having a mark portion and a space portion in accordance with a length of the recording mark portion;
 - a correction signal generating unit which generates a correction signal for offsetting a tilt of a waveform level of the recording light; and
 - a driving signal generating unit which generates a corrected driving signal for correcting the tilt of the waveform level of the recording light based on the strategy signal and the correction signal, and supplies the corrected driving signal to the light source as the input signal.
2. The information recording apparatus according to claim 1, wherein the correction signal generating unit comprises:
 - a tilt signal generating unit which generates a tilt signal having a tilt corresponding to a write power in the mark portion of the recording signal, and
 - an outputting unit which synthesizes the tilt signal and a write power signal indicating the recording power, and outputs the correction signal.
3. The information recording apparatus according to claim 1, wherein the driving signal generating unit synthesizes a signal obtained by switching the correction signal based on the strategy signal and a bias power signal indicating a bias power to generate the corrected driving signal.

4. The information recording apparatus according to
claim 1, , wherein the strategy signal comprises a write pulse
signal indicating a write pulse and a middle pulse signal
indicating a middle pulse, and wherein the correction signal
generating unit comprises:

a tilt signal generating unit which generates a first
tilt signal having the tilt corresponding to the write power
and a second tilt signal having a tilt corresponding to a middle
power in the mark portion of the recording signal;

10 a first outputting unit which synthesizes the first tilt
signal and the write power signal indicating the write power
to output the first correction signal as the correction signal;
and

15 an outputting unit which synthesizes the second tilt
signal and the middle power signal indicating the middle power
to output the second correction signal as the correction signal.

5. The information recording apparatus according to
claim 4, wherein the tilt signal generating unit comprises:

20 a tilting signal generating unit which generates a tilting
signal having a predetermined tilt in the mark portion;

a first tilt signal generating unit which amplifies the
tilting signal by a gain corresponding to the write power to
generate the first tilt signal; and

25 a second tilt signal generating unit which amplifies
the tilting signal by a gain corresponding to the middle power
to generate the second tilt signal.

6. The information recording apparatus according to
30 claim 4, wherein the driving signal generating unit synthesizes
a signal obtained by switching the first correction signal based
on the write pulse signal, a signal obtained by switching the
second correction signal based on the middle pulse signal, and
the bias power signal indicating the bias power to generate the

corrected driving signal.

7. The information recording apparatus according to claim 1, wherein the strategy signal comprises the write pulse signal indicating the write pulse and an erase pulse signal indicating an erase pulse, and wherein the correction signal generating unit comprises:

10 a first tilt signal generating unit which generates the first tilt signal having the tilt corresponding to the write power in the mark portion of the recording signal;

the first outputting unit which synthesizes the first tilt signal and the write power signal indicating the write power to output the first correction signal as the correction signal;

15 the second tilt signal generating unit which generates the second tilt signal having a tilt corresponding to the erase power in a period in which the erase pulse signal becomes active; and

20 an outputting unit which synthesizes the second tilt signal and the erase power signal indicating the erase power to output the second correction signal as the correction signal.

8. The information recording apparatus according to claim 7, wherein the driving signal generating unit synthesizes the signal obtained by switching the first correction signal based on the write pulse signal, the signal obtained by switching the second correction signal based on the erase pulse signal, and the bias power signal indicating the bias power to generate the corrected driving signal.

30 9. An information recording method which is executed by an information recording apparatus comprising a light source emitting a recording light for information recording, including:

a strategy signal generating process which generates a strategy signal indicating a driving signal waveform obtained

by modulating a recording signal having a mark portion and a space portion in accordance with a length of the mark portion;

5 a correction signal generating process which generates a correction signal for offsetting a tilt of a waveform level of the recording light; and

10 a corrected driving signal generating process which generates a corrected driving signal for correcting a tilt of the waveform level of the recording light based on the strategy signal and the correction signal, and supplies the corrected driving signal to the light source as an input signal.

10. The information recording method according to claim 9, wherein the correction signal generating process comprises:

15 a process which generates a tilt signal having a tilt corresponding to a write power in the mark portion of the recording signal, and

a process which synthesizes the tilt signal and a write power signal indicating a recording power to output the correction signal.

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11. The information recording apparatus according to claim 9, wherein the strategy signal comprises a write pulse signal indicating a write pulse and a middle pulse signal indicating a middle pulse, and wherein the correction signal generating process comprises:

25 a process which generates a second tilt signal having a first tilt signal having the tilt corresponding to the write power and a second tilt signal having a tilt corresponding to a middle power in the mark portion of the recording signal;

30 a process which synthesizes the first tilt signal and the write power signal indicating the write power to generate a first correction signal;

a process which synthesizes the second tilt signal and a middle power signal indicating the middle power to generate

a second correction signal;

a process which outputs the first correction signal and the second correction signal as the correction signal.

5 12. The information recording method according to claim 9, wherein the strategy signal comprises a write pulse signal indicating a write pulse and an erase pulse signal indicating an erase pulse, and wherein the correction signal generating process comprises:

10 a process which generates the first tilt signal having the tilt corresponding to the write power in the mark portion of the recording signal;

15 a process which synthesizes the first tilt signal and the write power signal indicating the write power to generate the first correction signal;

 a process which generates the second tilt signal having the tilt corresponding to the erase power in a period in which the erase pulse signal becomes active;

20 a process which synthesizes the second tilt signal and the erase power signal indicating the erase power to generate the second correction signal; and

 a process which outputs the first correction signal and the second correction signal as the correction signal.